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REMARKS

The Official Action of July 25, 2007 and the references cited therein have been carefully reviewed. Reconsideration is respectfully requested in light of the foregoing amendments to the specification and the claims and the following remarks.

Amendments to the Specification

Paragraph [0021] has been amended to incorporate the disclosure in the original claim 9 into the Specification. Applicant believes this fully addresses the Examiner's objection to the specification.

Amendments to the Claims

Claim 1 has been amended to include the recitations previously presented in canceled claims 4, 8, and 36. Additionally, claim 1 is amended to recite that the outer layer of the multilayer container has a glossy transparent appearance. Support for this amendment can be found in the Examples 1-3.

Claim 10 has been amended to (i) change its dependency from canceled claim 8 to claim 1, and (ii) amend the recitation of "unsaturated carboxylic acid" to "alpha,beta-unsaturated carboxylic acid". Applicant believes this amendment addresses the Examiner's objection to claim 10 under 37 C.F.R. §1.75(c).

Claims 11, 31, 32, and 37 have been amended to change their dependency from canceled claims to claim 1 and to correct the Markush group recitation.

Claims 40 and 41 have been amended to depend from claim 32, which provides proper antecedent basis for the recitation of "the blow-pin". Such amendment addresses the Examiner's objection to claims 40 and 41 under 35 U.S.C. §112, second paragraph.

Claims 2, 4-9, 13-28, 30, 36, 38, 39, and 47-54 are canceled.

No new matter is introduced by the amendments to the claims.

Rejections under 35 U.S.C. §103(a)

Claims 1, 3, 29, 31, 32, and 43-46 stand rejected under 35 U.S.C. §103(a) as obvious over U.S. Patent No. 3,819,792 (hereafter, Katsuya) in view of U.S. Patent No. 4,079,850 (hereafter, Suzuki) and either of U.S. Patent No. 3,233,416 (hereafter, Rainwater) or U.S. Patent No. 3,450,805 (hereafter, Chesser).

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Applicant respectfully submits that this rejection is improper as the cited references fail to teach or suggest each and every claim limitation. Specifically, the currently amended claim 1 recites an improved extrusion blow molding process to prepare a multilayer container, wherein the improvements over a conventional blow molding process include the application of an additional cooling means for discharging a cold gas having a temperature less than about 5°C under pressure into the inner cavity of the parison during inflation, and wherein the outer layer of the multilayer container has a glossy, transparent appearance, a thickness of about 1 mm to about 5 mm, is formed of a copolymer of ethylene and an alpha,beta-unsaturated carboxylic acid or a derivative thereof, and is directly bonded to an inner layer of a polyolefin. The advantage of using such an additional cooling means is to accelerate the cooling process of the molded structure from within the cavity and thereby make it possible to obtain such an outer layer of copolymers of ethylene and an alpha,beta-unsaturated carboxylic acids and derivatives thereof, which is thick and has a glossy, transparent appearance.

Katsuya teaches a shaped article, such as a bottle, having a double layered wall structure with one layer comprising a blend of a polyolefin (30-95 wt%) and an ionomer (70-5 wt%) and the other layer comprising a polyamide. Clearly, Katsuya has failed to teach the inner layer of polyolefin, as recited by claim 1. The Examiner has asserted that a blend of an ionomer and a polyolefin can reasonably be considered to be a derivative of a copolymer of ethylene and an alpha,beta-unsaturated carboxylic acid. However, it is noted that the addition of the ionomer in the polyolefin, as disclosed in Katsuya, is to improve the compatibility and adhesive strength between the layer of polyolefin layer and the layer of polyamide. At column 3, lines 57-65 of Katsuya, it is provided that "[i]n the practice of the present invention, only a very small amount of the ethylene copolymer needs to be mixed with the polyolefin in order to obtain some benefits" and "[a]n upper limit of the amount of the ethylene copolymer should be generally about 70% by weight because of physical and mechanical properties of the resulting shaped article and cost considerations". Therefore, the polyolefin/ionomer taught by Katsuya is not a derivative of a copolymer of ethylene and an alpha,beta-unsaturated carboxylic acid, and in fact, Katsuya teaches away from the present invention. In addition, although in column 6, lines 11-

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32, Katsuya teaches a blow molded bottle having a 1.0 mm thick outer layer of a polyolefin/ionomer blend and a 0.3 mm thick inner layer of polyamide, there is no disclosure that the outer layer also has a glossy transparent appearance as is recited in claim 1 of the present application. Finally, Katsuya has failed to provide details about the blow molding process used.

Suzuki is related to a blow-molding process of making a multilayer plastic container having a joint portion where each of the polymer layers constituting the multi-layer structure is substantially continuous with respect to the plane direction. Suzuki fails to teach the multilayer wall structure recited in claim 1. Moreover, Suzuki fails to teach or suggest the improved extrusion blow molding process recited in claim 1, especially the additional cooling means for discharging cold gas under pressure into the inner cavity of the parison during inflation.

Finally, each of Rainwater and Chesser teaches a blow molding process involves injecting cold fluid into the parison cavity during inflation, but neither teaches or suggests the particular multilayer wall structure and the particular polymers used therein.

Therefore, the cited references, when considered either individually or in combination, do not teach each and every limitation recited in claim 1 and the claims which depend therefrom. Applicant therefore respectfully submits that this rejection is improper and requests that it be withdrawn.

Claims 1, 3, 10-12, 29, 31, 32, 37, and 42-46 stand rejected under 35 U.S.C. §103(a) as obvious over U.S. Patent Application No. 20040161623 (hereafter, Domine) in view of Suzuki and either of Rainwater or Chesser.

It is the Applicant's position that the Examiner has not established a *prima facie* case of obviousness. In particular, as discussed above, Suzuki has failed to teach or suggest the additional cooling means for discharging cold gas under pressure into the parison cavity during inflation or the particular multilayer wall structure recited in claim 1, and neither Rainwater nor Chesser teaches or suggests the production of a plastic container with multilayer wall structures. In addition, the multilayer wall structure comprising a glossy, transparent outer layer having a thickness of about 1 mm to about 5 mm, formed of a copolymer of ethylene and an alpha,beta-unsaturated carboxylic acid or a derivative thereof and directly bonded to

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an inner layer of a polyolefin is not taught or suggested by Domine. Domine teaches a multilayer laminate comprising an ionomer layer, a tie layer of an acid copolymer or a blend of an acid copolymer and other polymer(s), such as polyolefin, and a substrate of a polymer. Domine discloses a blow molded container having such a multilayer wall structure in passing, which structure is comprised of an exterior ionomer layer, a pigmented ionomer intermediate layer, and a backing layer. Thus, the cited references fail to teach or suggest each and every limitation recited in claim 1 and the claims dependant thereon. Applicant respectfully submits that the rejection is improper and requests that it be withdrawn.

Claim 29 stands rejected under 35 U.S.C. §103(a) as (i) obvious over Katsuya in view of Suzuki and either of Rainwater or Chesser and further in view of U.S. Patent No. 6,303,071 (hereafter, Sugawara) or (ii) obvious over Domine in view of Suzuki and either of Rainwater or Chesser and further in view of Sugawara.

Claim 29 depends from claim 1 and therefore includes all the limitations recited in claim 1. As discussed above, the previously cited references, when considered individually or in combination, fail to teach or suggest all the limitations, especially the multilayer wall structure, recited in claim 1. Sugawara, on the other hand, is related to a process for producing blow molded articles weighing 500 g or more and where the mold inner surface is embossed or roughened to produce a desired feature. Although Sugawara has disclosed that the molded article may have a multilayer wall structure and listed a number of crystalline resins that may be used in the wall structure, it also fails to teach the particular polymers recited in claim 1. Thus, claim 29 is not obvious over the cited references, and the rejection should be withdrawn.

Claims 33-35, 40, and 41 stand rejected under 35 U.S.C. §103(a) as (i) obvious over Katsuya in view of Suzuki and either of Rainwater or Chesser and further in view of U.S. Patent No. 3,114,596 (hereafter, Wechsler) or (ii) obvious over Domine in view of Suzuki and either of Rainwater or Chesser and further in view of Wechsler.

Claims 33-35, 40, and 41 depend from claim 1 and therefore include all the limitations recited in claim 1. The previously cited references, when considered individually or in combination, fail to teach or suggest all the limitations, especially the

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multilayer wall structure, recited in claim 1. As Wechsler does not teach or suggest the multilayer wall structure or the particular polymers recited in claim 1, these claims are also not obvious over the cited references.

Moreover, claims 33-35 depend from claim 1 and further recite a blow-pin that is used as the additional cooling means to discharge cold gas under pressure into the parison cavity, wherein "the blow-pin is covered by a cooling jacket over at least 95% of the blow-pin surface, not inclusive of the nozzle" (claim 33) and, in order to allow the escape of gas from the inside of the molded structure, further comprises a cut into the nozzle (claim 34) or a rough surface on the nozzle (claim 35). Claims 40 and 41 also depend from claim 1 and further recite the blow-pin which further comprises a cut into the nozzle (claim 40) or a rough surface on the nozzle (claim 41).


Applicant respectfully disagrees with the Examiner's assertions that such a blow-pin structure has been taught by Wechsler and known in the art. Wechsler is related to a method or special apparatus to achieve direct cooling of the neck area during blow molding of necked plastic containers. As it is best illustrated in Figure 1 and described in column 1, lines 56-60 of Wechsler, the "water-jacketed blow pins" and "blow pins having apertures/skirts/channels" cited by the Examiner comprise a blow pin B and surrounded thereof a fluid tube 10, wherein the fluid tube 10 is inserted together with the blow pin B into the parison cavity and comprises apertures such as slots 12 in the inserted position for injecting water into the blow molded container around the neck section. Clearly, the "water-jacketed blow pins" taught by Wechsler are different from the blow-pin structure recited in the subject claims, both structurally and functionally. First, the cooling jacket recited in the subject claims is used to further cool the air in the blow-pin before it is discharged into the parison cavity and it does not have any aperture or slot to allow the fluid to escape. Secondly, the cuts and the rough surfaces recited in the subject claims are in relation to the blow pin nozzles and are for the purpose of allowing the escape of air from within the blow molded container and are not like the apertures or slots taught by Wechsler, which are in relation to the water jacket and are for the injection of fluid into the neck area of the blow molded container. Therefore, Applicant requests that the obviousness rejection of claims 33-35, 40, and 41 be withdrawn.

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In view of the foregoing amendments and remarks, Applicant respectfully requests that the rejections listed in the July 25, 2007 Office Action be withdrawn and that the application be passed to issue.

Respectfully submitted,



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